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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,781	02/25/2004	Sheng-Hsin Hu	K-C 16029.1	3777

7590 06/13/2005

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EXAMINER	
TSOY, ELENA	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/786,781	HU ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11,13-18 and 20-2220* is/are pending in the application.

4a) Of the above claim(s) *5 and 14-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-11,13,17-18,20-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 27, 2005 has been entered.

Response to Amendment

Amendment filed on May 27, 2005 has been entered. Claim 12, 19 have been cancelled. New claims 21-22 have been added. Claims 1-11, 13-18, 20-22 are pending in the application. Claims 5, 14-16 are withdrawn from consideration as directed to a non-elected invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 6, 8-11, 13, 17, 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al (US 20030082382).

Hiltzik et al disclose a method for producing coated activated carbon material, comprising providing activated carbon material in a fluidized bed (See P30), combining any colored masking pigment and an (aqueous) emulsion of polymer such as **silicone emulsion** (See

Table I), **siloxane** (See Fig. 4; Table VII, last line) or **polysiloxane** (See P32, line 5 from the bottom) (both siloxane and polysiloxane being claimed silicone as described in specification on page 12, lines 23, 30-31), polyisoprene (rubber), polychloroprene (rubber), polybutadiene (rubber) (claimed water insoluble elastomer) to form a coating liquor (See PP21, 32), spraying the coating liquid onto the activated carbon material while it is fluidized (See P25), drying (curing) the coating liquor to form a coating material at from just below ambient at about 50^0F or ambient 70^0F (21^0C) to 280^0F (121^0C) (See P29) using heated air (claimed heated gas) (See P36), wherein the coating material on the activated carbon material is substantially water insoluble (See P26). The colored pigment is Silver Afflair 119 Polar White (See Table VIII), which is well known to be **Mica/Titanium Dioxide** inorganic pigment (claimed mineral particles) available under the trademark (AFFLAIR is a registered trademark of E.I. Du Pont de Nemours and Company). Hiltzik et al further teach that coating may be applied in an amount 7.7 wt %, as required by amendment (See P56, last line; P57). Also, Hiltzik et al teach that with a coating *greater* than about 3.5%, ORVR capacity dropped and would require a larger canister to have the same adsorptive capacity as pellets with less or no coating See P60). Hiltzik's coating of *greater* than about 3.5% covers claimed at least 5wt %, as required by amendment.

Hiltzik et al fail to teach that the pigment has an absolute HunterLab "a" value or absolute HunterLab "b" value greater than 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant HunterLab parameters (including those of claimed invention) in Hiltzik et al/Karapasha through routine

experimentation depending on intended use of a final product in the absence of a showing of criticality.

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It is the Examiner's position that coating has a Shore A hardness of less than about 70 inherently because claimed polymer is also polyisoprene rubber, polychloroprene rubber, polybutadiene rubber (See specification, page 12, lines 4-6).

3. Claims 1-4, 6, 8-11, 13, 17, 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al (US 20030082382) in view of Karapasha (WO9112030).

Hiltzik et al are applied for the same reasons as above. Hiltzik et al do not show that other mineral particles can be used in a coating liquid for for producing coated activated carbon material.

Karapasha teaches that TiO_2, chalk, ZrO_2 (claimed mineral particles) is suitable for the use as a masking agent (See page 14, lines 32-34) in an aqueous dispersion (See page 15, line 1) of any polymer binder (See page 14, lines 36-37) for producing coated activated carbon material by spraying the coating liquid onto the activated carbon material while it is fluidized, drying (curing) the coating liquor using heated air (See page 27, lines 29-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used TiO_2, chalk, ZrO_2 as masking agent in Hiltzik et al with the expectation of providing the desired coated activated carbon material since Karapasha teaches that TiO_2, chalk, ZrO_2 (claimed mineral particles) is suitable for the use as a masking agent in an aqueous

dispersion of any polymer binder for producing coated activated carbon material by spraying the coating liquid onto the activated carbon material while it is fluidized, drying (curing) the coating liquor using heated air.

4. Claims 1-4, 6-11, 13, 17, 18, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karapasha (WO9112030) in view of Hiltzik et al (US 20030082382).

Karapasha discloses a method for producing coated activated carbon material, comprising providing activated carbon material in a fluidized bed (See page 27, lines 17, 29), combining a masking agent such as TiO_2, chalk, ZrO_2 (See page 14, lines 32-34), zeolites (claimed catalyst) including silica/alumina zeolites (See page 14, lines 1-23), and an aqueous dispersion (suspension) (See page 15, line 1) of any polymer binder (claimed water insoluble polymer) (See page 14, lines 36-37) to form a coating liquor, spraying the coating liquid onto the activated carbon material while it is fluidized, drying (curing) the coating liquor to form a coating material at 50^0F or ambient 138^0F (59^0C) using heated air (See page 27, lines 29-37). Karapasha further teaches that, in general, binders are *either* **dispersible** in water (i.e. water insoluble, as required by applicant) *or* soluble (See page 15, line 1). Karapasha also teaches that, generally, 1-10, typically 5-6 wt % of coating may be used, as required by amendment (See page 15, lines 7-8).

Karapasha fail to teach that the pigment has an absolute HunterLab "a" value or absolute HunterLab "b" value greater than 10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant HunterLab parameters (including those of claimed invention) in Karapasha through routine experimentation depending on intended use of a final product in the absence of a showing of criticality.

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Karapasha further teaches that any known polymer without limitation can be used as a binder (See page 14, 36-37). However, Karapasha fails to teach that the binder is a silicone emulsion (Claims 1, 8) or elastomer (Claim 13).

Hiltzik et al teaches that **silicone emulsion** (See Table I) or polyisoprene (rubber), polychloroprene (rubber), polybutadiene (rubber) (See PP21, 32); polyisoprene (rubber), polychloroprene (rubber), polybutadiene (rubber) (claimed water insoluble elastomer) can be used in combination with masking agent to form a coating liquor (See PP21, 32) for producing coated activated carbon material in a fluidized bed (See P30) by spraying the coating liquid onto the activated carbon material while it is fluidized (See P25), and drying (curing) the coating liquor to form a coating material at from just below ambient at about 50^0F or ambient 70^0F (21^0C) to 280^0F (121^0C) (See P29) using heated air (claimed heated gas) (See P36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used **silicone emulsion** or polyisoprene (rubber), polychloroprene (rubber), polybutadiene (rubber) (See PP21, 32); polyisoprene (rubber), polychloroprene (rubber), polybutadiene (rubber) in a coating liquid of Karapasha with the expectation of providing the desired coated activated carbon material since Karapasha teaches that any known polymer without limitation can be used as a binder and Hiltzik et al teaches that silicone emulsion or rubber can be used in combination with masking agent to form a coating liquor for producing coated activated carbon material in a fluidized bed.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al or Karapasha in view of Hiltzik et al, in view of Cavezzan et al (US 4,954,539).

Hiltzik et al/Karapasha in view of Hiltzik et al are applied for the same reasons as above. Hiltzik et al fail to teach that the coating liquor comprises a catalyst.

Cavezzan et al teaches that silicone emulsions comprising a particular tin crosslinking catalyst less foul coating apparatus and combine very good reactivity with a sufficient bath pot life (See column 1, lines 59-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used silicone emulsions comprising a particular tin crosslinking catalyst as a coating liquid in Hiltzik et al/Karapasha in view of Hiltzik et al with the expectation of providing the desired less fouling of coating apparatus and very good reactivity with a sufficient bath pot life, as taught by Cavezzan et al.

6. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiltzik et al/ Hiltzik et al in view of Karapasha/Karapasha in view of Hiltzik et al, and further in view of Hogenson (US 4,643,783).

Hiltzik et al/Hiltzik et al in view of Karapasha/Karapasha in view of Hiltzik et al are applied for the same reasons as above. Hiltzik et al/ Hiltzik et al in view of Karapasha/Karapasha in view of Hiltzik et al fail to teach that the silicone binder is elastomeric.

Hogenson teaches that polysiloxane rubber can be used as a coating material (See column 5, lines 35-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used polysiloxane rubber as polysiloxane coating of Hiltzik et al with the

expectation of providing the desired coated activated carbon material since Hiltzik et al teach that any coating materials capable of forming a continuous film including natural and synthetic rubber can be used as a coating material (See P32), and Hogenson teaches that polysiloxane rubber can be used as a coating material.

7. The prior art made of record and not relied upon is considered pertinent to applicant disclosure.

Morris (US 20020006481) shows that Afflair 119 Polar White is **Mica/Titanium Dioxide** inorganic pigment available under the trademark (AFFLAIR is a registered trademark of E.I. Du Pont de Nemours and Company) (See P32).

Hiltzik et al (US 20030118823) shows that Silver Afflair 119 Polar White (b) is DuPont TI-Pure Titanium Dioxide (See Table V).

Mizuno et al (US 4,386,947) teach that silicone rubber is suitable for covering activated carbon structure (See column 6, lines 57-59).

Response to Arguments

8. Applicant's arguments with respect to rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-141523. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELENA TSOY
PRIMARY EXAMINER

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Primary Examiner
Art Unit 1762

June 9, 2005